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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/812,014

03/30/2004

Eiji Kimura

4468-017B

2801

7590

06/06/2005

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EXAMINER

NGUYEN, TU T

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EL

Office Action Summary	Application No.	Applicant(s)	
	10/812,014	KIMURA, EIJI	
	Examiner	Art Unit	
	Tu T. Nguyen	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-6, 12, 15, 21, 24 and 30-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3, 5, 6, 12, 15, 21, 24 and 30-32 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/877,202.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3,5-6,12,15,21,24,30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horiuchi et al (6,594,003).

With respect to claim 3, Horiuchi discloses an optical characteristic measuring apparatus for measuring characteristics of devices under test having a first optical transmission line 116 (fig 5) letting light through only in one direction and a second optical transmission line 112 (fig 5) letting light through only in the direction opposite to said one direction. The apparatus comprises: a first variable wavelength light source 140 (fig 5) for generating a first variable wavelength λ_b light; a first light modulating means 142 (fig 5) for introducing into said first optical transmission line 116 (fig 5) a first incident light obtained by modulating said first variable wavelength light with a frequency of a first electrical signal 134 (fig 5), wherein said first incident light exits from said first optical transmission line as a first outgoing light; a first optical/electrical converting element 144 (fig 5) for converting by a first optical/electrical conversion process, the first outgoing light into a second electrical signal; a second variable wavelength light source 124 (fig 5) for generating a second variable wavelength light λ_a ; a signal source for generating reference electrical signal 120 (fig 5); a second light modulating element

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128 (fig 5) for introducing into the second optical transmission line 112 (fig 5) a second incident light obtained by modulating said second variable wavelength λ_a light with said reference electrical signal f_s , wherein said second incident light exits from said second optical transmission line as a second outgoing light; and a second optical/electrical converting element 132 (fig 5) for converting by a second optical/electrical conversion process, the second outgoing light into the first electrical signal and for outputting the first electrical signal into said first light modulating element.

Horiuchi does not explicitly disclose the claimed optical/electrical converter. However, it would have been known in the art that Horiuchi's photo-detectors perform the same function as the claimed converters. It would have been obvious to modify the claimed converter with the photo-detector as taught in Horiuchi to make the system more accurate.

With respect to claims 5-6, Horiuchi discloses measuring a phase difference between the two signal lights (column 3, lines 50-51). It would have been obvious to modify Horiuchi to measure the phase difference between the signals as claimed to determine different characteristics of the DUT.

With respect to claims 12,15,21,24,30,31-32, refer to discussion discussed in claim 3 above.

Allowable Subject Matter

Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior arts of record do not disclose a third optical/electrical converting means for converting by the optical/electrical conversion process the reflected light generated when said second light modulating means introduces said second incident light into said second optical transmission line as claimed in claim 4 in combination with all the limitations of the base claim.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T. Nguyen whose telephone number is (571) 272-2424. The examiner can normally be reached on T-F 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley Jr. can be reached on (571) 272-2800 Ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu T. Nguyen
Primary Examiner
Art Unit 2877

05/27/2005